

Claims

1. A recording device for image recording having a recording unit (12) attachable to the head (3) of a user (4),
5 having a sensor device (5, 6, 7) for detecting eye movements of the user (4), and having an analysis unit (9), connected downstream from the sensor unit (5, 6, 7), which generates control signals (10) that are applied to an actuator acting on the recording unit (12), through which the image section
10 detected by the recording unit (12) is movable, characterized in that the sensor device (5, 6, 7) detects pitching, yawing, and rolling movements (22, 24, 26) of at least one eye (8) of the user (4) and the analysis unit (9) analyzes the detected eye movements and generates control
15 signals (10) therefrom, which cause the actuator to move the image section detected by the recording unit (12) so it follows the detected and analyzed eye movements.
2. The recording device according to Claim 1,
20 wherein the analysis unit (9) analyzes voluntary and involuntary eye movements (22, 24, 26) performed by the user (4).
3. The recording device according to Claim 1 or 2,
25 wherein the analysis unit (9) has an intrasaccadic suppression device, which suppresses reproduction of the images recorded by the recording unit (12) if the velocity of the eye movement (22, 24, 26) of the user (4) exceeds a predefined limiting value.
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4. The recording device according to one of Claims 1 through 3,

whose sensor device has an infrared mirror (7) positioned in the viewing field of the user (4) and an infrared camera (5) directed toward the mirror area of the infrared mirror (7).

- 5 5. The recording device according to one of Claims 1 through 3,
whose sensor device comprises a contact lens provided with induction coils.
- 10 6. The recording device according to one of Claims 1 through 5,
wherein a projection device is provided for projecting the images recorded by the recording unit (12) in the viewing field of the user (4).
- 15 7. The recording device according to one of Claims 1 through 6,
whose recording unit has at least one optical camera (12).
- 20 8. The recording device according to one of Claims 1 through 7,
wherein the recording unit (12) has a mount rotatable around three spatial axes.
- 25 9. The recording device according to one of Claims 1 through 8,
wherein a sensor device (5, 6, 7) is assigned to each eye (8) of the user (4).
- 30 10. The recording device according to Claim 9,
wherein the analysis unit (9) analyzes the vergence position of the eyes (8) of the user (4) in order to generate an autofocus signal for the recording unit (12).

11. The recording device according to Claim 9 or 10,
wherein a camera (12), which follows the movements of the
respective eye (8), is assigned to each eye (8) of the user
5 (8).

12. A method for controlling a recording device (1),
in which the eye movements of a user (4) wearing the
recording device (1) are detected by a sensor device (5, 6,
10 7) and analyzed by an analysis unit (9) and in which an image
section detected by a recording unit (12) is moved with the
aid of an actuator acting on the recording unit (12),
characterized in that pitching, yawing, and rolling movements
of an eye (8) of the user (4) are detected by the sensor
15 device (5, 6, 7), the detected movements are analyzed by the
analysis unit (9) and the image section of the recording unit
(12) is moved so it follows the detected and analyzed
movements of the eye (8).

20 13. The method according to Claim 12,
wherein voluntary and involuntary movements of an eye (8) of
the user (4) are detected and analyzed.

14. The method according to Claim 12 or 13,
25 wherein the display of images recorded with the aid of the
recording unit (12) is suppressed in the event of movements
whose velocity exceeds a predefined limiting value.

15. The method according to one of Claims 12 through 14,
30 wherein the vergence position of both eyes (8) of the user
(4) is analyzed and used for focusing the recording unit
(12).

16. A use of a recording device according to one of Claims 1 through 11 for recording films.

17. A use of the recording device according to one of Claims
5 1 through 11 as a night-vision device.

18. A use of the recording device according to one of Claims 1 through 11 for monitoring the viewing direction of test subjects.